



Caterina D'Anna

WORK EXPERIENCE

 **ICGM, INSTITUT CHARLES GERHARDT MONTPELLIER** – MONTPELLIER, FRANCE

Department Porous & Hybrid Materials | **Email** icgm-contact@umontpellier.fr | **Website** <https://www.icgm.fr/>

PH.D. VISITING RESEARCHER – 09/2024 – CURRENT

- Conducting research on mesoporous silica-based adsorbents derived from rice husk for environmental remediation.
- Synthesizing and functionalizing silica materials for PFAS removal from water.
- Characterizing materials using IR spectroscopy, nitrogen porosimetry, and XRD.
- Performing adsorption experiments and evaluating efficiency through LC-MS and GC-MS analyses.

 **ENI RENEWABLE, NEW ENERGIES AND MATERIAL SCIENCE RESEARCH CENTER OF NOVARA** – NOVARA, ITALY

Department Mass Spectrometry Analysis laboratories | **Website** <https://www.eni.com/en-IT/home.html>

ACADEMIC INTERNSHIP – 03/2023 – 10/2023

- Developed high-resolution LC-MS methods for the detection of PFAS in water samples.
- Performed flow injection ESI-MS and FT-ICR MS for untargeted pollutant identification.
- Optimized sample preparation via solid-phase extraction (SPE) for real water matrices.
- Conducted GC-MS analysis to assess recovery efficiency of adsorbed fluorinated pollutants.
- Applied MALDI-TOF-MS to study biomolecules; conducted IR and porosity analysis on polymeric resins.
- Processed data using PeakbyPeak software from Spectroswiss.

 **UNIVERSITY OF FERRARA** – FERRARA, ITALY

Department Scienze per l'ambiente e la salute |

Website <https://www.unife.it/studenti/dottorato/it/corsi/riforma/scienze-per-ambiente-e-la-salute>

PH.D. STUDENT IN ENVIRONMENTAL AND HEALTH SCIENCES – 10/2022 – CURRENT

- Investigating adsorptive properties of nano and mesoporous materials for water decontamination.
- Designing novel adsorbents, including fluorinated silica materials for PFAS removal.
- Conducting adsorption kinetics and isotherm studies.
- Optimizing analytical methods via LC-MS (FT-ICR MS).

EDUCATION AND TRAINING

09/2020 – 10/2022 Ferrara, Italy

MASTER'S DEGREE IN CHEMICAL SCIENCES University of Ferrara

- Synthesized WO_3 and $\text{WO}_3/\text{BiVO}_4$ photoanodes for integration in photoelectrochemical cells for solar hydrogen production.
- Characterized electrodes through chronoamperometry, UV-Vis spectroelectrochemistry, and transient absorption spectroscopy.

Website <https://corsi.unife.it/lm-scienzachimiche> | **Final grade** 110/110 cum laude | **Level in EQF** EQF level 7 |

Thesis "Charge Transfer Dynamics in $\text{WO}_3/\text{BiVO}_4$ Modified with CoFe-BP"

09/2017 – 09/2020 Ferrara, Italy

BACHELOR'S DEGREE IN CHEMISTRY University of Ferrara

Website <https://corsi.unife.it/chimica> | **Level in EQF** EQF level 6 | **Thesis** Lithium-Ion Batteries: Reuse and Recycling

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	B2	B2	B2
FRENCH	A2	A2	A2	A2	A1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

● SKILLS

laboratory techniques | mass spectrometry | analytical chemistry | advanced materials | high-performance liquid chromatography | perform scientific research | apply scientific methods | use laboratory equipment | Microsoft Word | Microsoft Excel

● PUBLICATIONS

2024
[Targeted determination of volatile fluoroalkyl pollutants and non-targeted screening for environmental monitoring](#)

Journal Name: Transportation Research Part A: Policy and Practice | Volume, Issue and Pages: Vol 175, May 2025 | Publisher: Elsevier

2024
[Competitive Adsorption of 4-Hydroxybenzaldehyde and Toluene onto High Silica Zeolites](#)

Journal Name: Environmental Processes | Volume, Issue and Pages: Vol. 11, 49 | Publisher: Springer

The undersigned authorizes the processing of their personal data in accordance with GDPR 679/16 ("European Regulation on the Protection of Personal Data"). The undersigned consents to the publication of this curriculum vitae on the website of the University of Ferrara.

San Pietro Verntoico , 09/10/2025